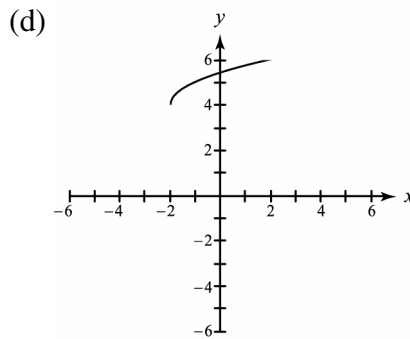
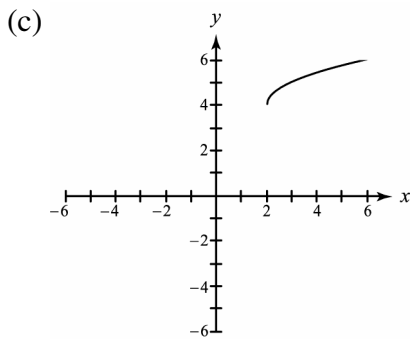
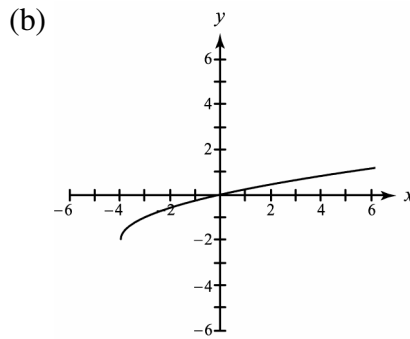
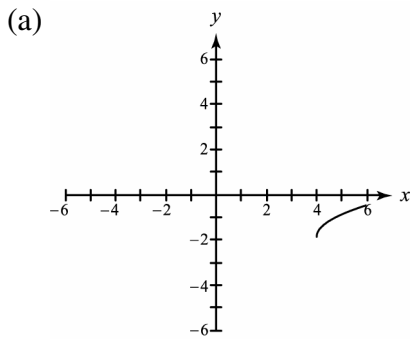
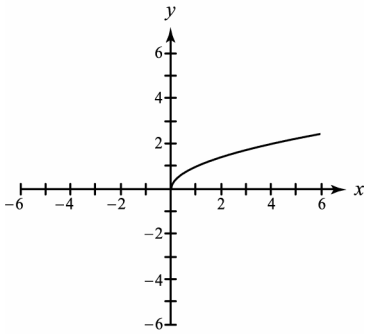


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1. Simplify $\sqrt{36x^6}$. Assume that all variables are positive.
- (a) $6x$ (b) $6x^3$ (c) $12x^2$ (d) $18x^3$
2. Simplify $\sqrt[3]{64x^6}$. Assume that all variables are positive.
- (a) $4x^2$ (b) $8x^3$ (c) $8x$ (d) $4x^3$
3. Simplify $(\sqrt{2} - \sqrt{5})(\sqrt{2} + \sqrt{5})$. 3. _____
- (a) $(\sqrt{2} - \sqrt{5})^2$ (b) -3 (c) $2\sqrt{5}$ (d) 7
4. Write $7^{\frac{3}{5}}$ in radical notation. 4. _____
- (a) 7 (b) $\sqrt[3]{7^5}$ (c) $\sqrt[5]{7^3}$ (d) 7^2
5. Write $\left(\frac{y}{x}\right)^{-\frac{1}{3}}$ in radical notation. 5. _____
- (a) $\frac{y^3}{x^3}$ (b) $\frac{x^3}{y^3}$ (c) $\sqrt[3]{\frac{y}{x}}$ (d) $\sqrt[3]{\frac{x}{y}}$
6. Evaluate $(-64)^{\frac{2}{3}}$ by hand. 6. _____
- (a) 16 (b) -16 (c) 24 (d) -24
7. Evaluate $32^{-\frac{3}{5}}$ by hand. 7. _____
- (a) 8 (b) -8 (c) $\frac{1}{8}$ (d) $-\frac{1}{8}$

8. Given the graph of $y = \sqrt{x}$, graph $y = \sqrt{x+2} + 4$. 8. _____



9. Simplify $(4x^{\frac{2}{3}}y^2)^3$. 9. _____

- (a) $12x^2y^5$ (b) $64x^2y^6$ (c) $64x^{\frac{8}{3}}y^5$ (d) $12x^2y^6$

10. Simplify $\left(\frac{x^2}{y^3}\right)^{-\frac{1}{3}}$. 10. _____

- (a) $\frac{y}{x^{\frac{2}{3}}}$ (b) $-\frac{x^{\frac{2}{3}}}{y}$ (c) $\frac{x^{\frac{2}{3}}}{y}$ (d) $\frac{x^{\frac{2}{3}}}{y^{\frac{1}{3}}}$

11. Simplify $\sqrt[3]{y^2} \cdot \sqrt[3]{y^4}$. 11. _____

- (a) y^3 (b) $y^{\frac{1}{3}}$ (c) $y^{\frac{8}{3}}$ (d) y^2

12. Simplify $\frac{\sqrt{x^9}}{\sqrt{x^3}}$. 12. _____

- (a) x^2 (b) $\sqrt{x^3}$ (c) x^3 (d) x^6

13. Simplify $4\sqrt{2} - 2\sqrt{2} + 5\sqrt{5}$. 13. _____

- (a) $2\sqrt{2} + 5\sqrt{5}$ (b) $4 + 5\sqrt{5}$ (c) $7\sqrt{2}$ (d) $4\sqrt{2} + 3\sqrt{5}$

14. Simplify $4\sqrt{12} + 5\sqrt{3}$. 14. _____

- (a) $4\sqrt{12} + 5\sqrt{3}$ (b) $9\sqrt{15}$ (c) $21\sqrt{3}$ (d) $13\sqrt{3}$

15. Solve $\sqrt{2x+19} = x+2$. 15. _____

- (a) $-3, 5$ (b) $-5, 3$ (c) -17 (d) 3

16. Rationalize the denominator of $\frac{1}{\sqrt{3}-2}$. 16. _____

- (a) $-\sqrt{3}-2$ (b) $\sqrt{3}+2$ (c) 1 (d) $\frac{\sqrt{3}+2}{5}$

17. One leg of a right triangle has length 6 feet and the hypotenuse has length 10 feet. Find the length of the third side. 17. _____

- (a) 6 feet (b) 4 feet (c) 8 feet (d) 16 feet

18. Find the distance between $(-3,1)$ and $(2,-4)$. 18. _____

- (a) $5\sqrt{2}$ (b) $\sqrt{10}$ (c) $2\sqrt{13}$ (d) 0

19. Write the complex expression in standard form. $(2+4i)-(6-5i)$ 19. _____

(a) $8-i$

(b) $-4-i$

(c) $12-20i$

(d) $-4+9i$

20. Write the complex expression in standard form. $\frac{2+12i}{1-i}$ 20. _____

(a) $3+11i$

(b) $2-12i$

(c) $-5+7i$

(d) $14+10i$